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## Major Progress at 16th CEOS Plenary

As the concluding event of a busy and successful ESA chairmanship of the Committee on Earth Observation Satellites (CEOS), the 16th CEOS Plenary Meeting took place at ESA's ESRIN establishment in Frascati, Italy, on 20 and 21 November.

The meeting was attended by 80 high-level representatives of space agencies and their major partners.

A number of issues were discussed and agreed upon at the meeting, among which are the launch of a WSSD Follow-up Programme, the adoption of a Five-Year Plan for CEOS and progress reports of the four Working Groups.

### Launch of a WSSD Follow-up Programme

A major issue on the agenda, and the subject of a dedicated preparatory meeting on 19 November, was the proposal for a follow-up programme in response to the outcomes of the WSSD (World Summit on Sustainable Development) held in Johannesburg in August/September 2002. CEOS attended the WSSD as a formal observer and participated in the negotiations of the final documents adopted by Heads of State. These make a number of

**Prof. José Achache**  
 CEOS Chair 2002  
 ESA HQ



specific references to the use of space infrastructure in support of sustainable development, the need for information for improved decision-making and, specifically, the need for observations from space to provide unbiased, freely accessible information about the state of the Earth and its environment.

At the Plenary, CEOS Members and Associates agreed to launch a WSSD follow-up programme as a visible concrete action of the international space community in support of sustainable development. Three "Modules" were agreed for immediate start to address some of the areas identified in the WSSD Plan of Implementation where space-based Earth observation would be essential to assist sustainable development activities. The first, led by NOAA, is aimed at education, training and capacity building; the second, co-led by ESA and NASDA, is focused on management of water resources; the third, co-led by USGS and CCRS, deals with the use of Earth observation for global mapping. Space agencies have indicated their willingness to develop additional activities in these three areas, and the programme allows CEOS members to provide their contributions, "as and how they feel fit."

### Adoption of CEOS Five-Year Plan

At the last CEOS Plenary, the CEOS Chair has been mandated to lead the development of a Five-Year Strategic Plan. The exercise, conducted by a team of CEOS members, has carefully analysed the current activities of CEOS and identified strategic priorities, which shall be tackled over the next five years. An important issue highlighted, and agreed by the delegates, was that CEOS needs to put emphasis on positioning itself within the international community, particularly vis-à-vis user entities and programmes, and play increasingly a role as the

(to be continued on next page.)





## CEOS Launches World Summit on Sustainable Development (WSSD) Follow-up Programme

Dr. Josef Aschbacher, ESA

Mr. Michael Hales, NOAA

As the recognized body for international coordination of civil Earth observation programmes, Members of the Committee on Earth Observation Satellites (CEOS) worked at World Summit on Sustainable Development (WSSD) to ensure recognition of the contribution of Earth observation satellites to sustainable development. The 54-page WSSD Plan of Implementation, adopted by Heads of State at WSSD 2002, contains 12 high profile references to the benefits of global Earth observation and its value in providing information in support of sustainable development.

A high-level half-day WSSD related workshop on "Earth Observation for Sustainable Development" took place immediately prior to the 16th CEOS Plenary in Frascati, in November 2002. Out of this event, it was agreed that coordinated actions would be undertaken by CEOS Members and Associates in implementing key WSSD follow-up elements. An ad-hoc CEOS WSSD Follow-up Team (WSSD Team) was established to achieve common visibility for CEOS Members and Associates' related WSSD follow-up activities. Furthermore, it was agreed that such follow-up activities would be conducted in a modular structure to preserve the identity of individual contributions as well as enable a step-wise implementation of a larger overall strategy.

The topics, which reflect the specific references to Earth observation in the WSSD Plan of Implementation and where action from CEOS seems appropriate, are: Area 1 – Education, Training and Capacity Building; Area 2 – Water Resource Management; Area 3 – Disaster Management and Conflicts; Area 4 – Climate Change; and Area 5 – Global Mapping, Land-use Monitoring and Geographic Information Systems.

Three out of these five Areas were selected at the 16th CEOS Plenary in Frascati to form the first elements of the WSSD Follow-up Programme, where CEOS Members and Associates are committing additional resources. These three Areas, which represent the first "Modules" of the Programme, are Areas 1, 2 and 5 respectively.

- Module 1 addresses a key component of sustainable development, namely training local people in developing countries and adapting technology to their local environments. The WSSD Team is currently planning an education and training workshop in Africa later this year as a first in meeting the need for capacity building (Module 1) in developing countries.
- This workshop will also focus on water resource management (Module 2) and GIS (Module 5), using the WSSD Type-2 Partnership on Earth Observation Education and Training led by CEOS as the primary vehicle to implement this module.
- Module 2 focuses on concrete activities to use Earth observation for water resources management in developing countries.

The CEOS WSSD Team is working to coordinate national and organizational commitments as well as exchange best practices to further the objectives above, with the goal of developing approaches that will continue to be useful for many years to come.

Michael Hales of NOAA is leading the Team. ■

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international coordinating body of Space-based Earth observation activities as has been successfully demonstrated in the negotiations of the Johannesburg World Summit.

### UNESCO approved as CEOS Associate

The CEOS delegates voted unanimously at the meeting to approve the membership of the United Nations Educational, Scientific and Cultural Organization (UNESCO) as a CEOS Associate, hence recognising UNESCO's strong involvement in Earth observation. All CEOS Agencies warmly welcomed the new Associate, which brings the total count to 23 Members and 21 Associates of CEOS.

### CEOS Chair handed over to NOAA

As his final act of chairman for the meeting, Prof. José Achache formally turned over the CEOS chair to Mr. Gregory Withee, Assistant Administrator



for Satellite and Information Services at the US National Oceanic and Atmospheric Administration (NOAA). The CEOS chair is rotated among Members annually, with China slated to assume the chairmanship at the conclusion of next year's plenary. ■

## The Year Ahead: CEOS 2003

**Mr. Gregory W. Withee**  
NOAA  
CEOS Chairman



Nineteen years ago in 1984 the Committee on Earth Observation Satellites (CEOS) was initiated to better facilitate our global efforts to monitor the Earth from space. Over the years we have realized many benefits by working together in using Earth observations from space to study and better understand Earth system processes and the challenging and important problems facing all of us: food, water, energy, natural disasters, to name a few. However, there is still much work to be done.

In the next 10 years, the space community will launch approximately 100 Earth observation satellites. This is a very impressive number that reflects significant commitments by numerous governments, space agencies, and international organizations. In fact, given the resource-intensive nature of these endeavors, one would think that these efforts and their benefits have been understood from every possible angle. Unfortunately, we know from our own experience that collaborative opportunities have not been fully maximized in all areas of Earth observation. Climate research is only one example where more international collaboration is necessary.

Additionally, each of us must do a better job involving stakeholder communities and end users in the development of mission observation requirements. This year, CEOS will focus on articulating a more comprehensive satellite data utilization approach that incorporates interests from all stakeholders and user communities. Fora where we can come together, such as utilization workshops, are necessary for understanding users' needs in developed and especially developing countries alike.

Keeping these goals in mind, I urge CEOS Members and Associates to include this CEOS focus in their utilization efforts this year. Some of you have already started. For example, I am currently working with NASDA to help prepare a symposium focused on "Space Platforms for Water and Climate Observations" at which we will generate recommendations to enhance data sharing and data utilization, particularly in connection with the Third World Water Forum.

Education and training and capacity building workshops are also necessary to further develop utilization capabilities around the world. The strength of CEOS as the international coordinating body on Earth observation was successfully demonstrated at the Johannesburg World Summit for Sustainable Development (WSSD), resulting in a large number of specific references to Earth observation in the official Johannesburg documents adopted by Heads

of State. As a follow-up to the Summit, CEOS has developed an Ad-hoc WSSD Follow-up Team that is currently planning a training and capacity building workshop with a focus on water management and geographical information systems (GIS) to take place in Africa in fall 2003. I hope this workshop will provide a successful model that can be used in mounting training and capacity building workshops in various parts of the world in the near term future.

As CEOS Chairman, I am also Co-Chairman of the Integrated Global Observing Strategy (IGOS) Partnership this year. To strengthen both CEOS and IGOS in the year ahead, I aim to reinforce the connections between these two coordination mechanisms in three ways. First, I plan to further strengthen internal and external communication channels while encouraging high-level involvement through the CEOS Strategic Implementation Team, which is a proven working forum for effective coordination. Second, I seek to cultivate ties among the six IGOS Themes and the three CEOS Working Groups, thus capitalizing upon more efficient gathering and sharing of Earth observation information. Lastly, we must raise the political profiles of both CEOS and IGOS so that budget planners and policy makers better understand the need to fund future missions in support of our efforts to better understand the Earth.

In closing, I would like to add that communicating our message and the benefits of what we're doing to others is also a top priority. However, I also recognize that we must communicate a more unified message within our own community and work more closely together. Doing so will help us understand how organizations like CEOS, the Coordination Group for Meteorological Satellites (CGMS) and the WMO Consultative Meetings on High-Level Policy on Satellite Matters can most effectively work together without experiencing unnecessary overlaps. Once our space community has a more consistent and consolidated message, decision makers will better understand the value of space-based observations to end users and our global society.

I invite you all to work with me in tackling these challenging tasks this year. Please join with me in making these efforts successful. I look forward to working with you.

Gregory W. Withee ■



## The Working Group on Calibration and Validation

**Mr. Yves-Louis Desnos**  
ESA / ESRIN  
Chair, WGCV

The Working Group on Calibration and Validation (WGCV), and its six technical subgroups, continue to provide a forum for sustained debate, international co-operation and common actions. The addition of a further subgroup concerned with atmospheric chemistry has provided an important additional input to the WGCV's work, and filled a recognised gap within the atmospheric chemistry community.

At their first meeting, the Atmospheric Chemistry subgroup identified the need for sustained support for the ground networks in order to complement the space observing systems for climate change. To this end, the

subgroup recommends that the ground network station's homeland institutions, and the interested space agencies, commit to sustained financial support of both existing network stations and for new stations in under-sampled regions of the globe. In addition the network station should commit to established guidelines for data accuracy and timely archival. The second meeting of the subgroup was held on 14 December 2002 at ESA/ESRIN.

The membership of the Infrared/Visible Optical Sensors (IVOS) subgroup has now been re-established, and the 12th IVOS subgroup meeting was held at ESA-ESRIN, Frascati, from 14 – 15 November 2002. The subgroup has stressed the importance of documentation in the derivation of the exo-atmospheric solar spectrum used in data processing, and that an accepted reference spectrum should be used as a standard. An in-depth study has been proposed to characterise on-board solar diffusers, including their stability in the space environment.

The Land Product Validation (LPV) subgroup has produced a report on the best practise strategies for validating satellite-derived LAI products. Protocols for active fire burned area validation and reporting have been developed, and a network of long-term monitoring sites for fire product validation have been established. A 'best practises' special issue or report on land cover is also planned. The subgroup's new activities include a topical workshop on Albedo validation, which was held from 22 – 24 October 2002 in Boston, USA. Also recognised is the importance of working with industry and NPOESS.

The Terrain Mapping (TM) subgroup will focus dedicated effort towards SRTM validation and evaluation. SRTM / C-SAR DEM data has been released by NASA / JPL and quality assessment activities on the data have started. The test site dossier is being updated to include more European validation sites and best practice documents are being revised.

The microwave subgroup met at the Polytechnic University of Barcelona, Spain, from 9 – 11 October 2002, in conjunction with the 2nd International Microwave Radiometer Calibration Workshop (mCal-2002). The meeting focused on general terminologies for microwave radiometry, terminology for Aperture Synthesis Radiometers and terminology for Polarimetric Radiometers. The next meeting is provisionally planned in conjunction with the IGARSS symposium in July 2003, Toulouse, France.

The 2002 SAR subgroup workshop, hosted by the British National Space Centre (BNSC), was held at the DTI Conference Centre, London, from 24 – 26 September 2002. The meeting involved approximately 40 participants from Europe, Japan and Canada. There were three technical sessions and an invited paper from the WGCV chair on the objectives and programme of the WGCV and the activities of its subgroups. The three technical sessions comprised presentations and round-table discussions covering SAR calibration techniques, Envisat ASAR calibration and SAR polarimetry. Resulting from discussions held at the workshop, the subgroup made the recommendation to CEOS plenary to ensure that calibration processes for SAR are traceable to the primary standards. The next SAR subgroup meeting will have as its main theme the identification of SAR polarimetric calibration requirements and is planned for June 2003 in Canada, hosted by the CSA.

Collaboration with the Working Group on Information Systems and Services (WGISS) has been ongoing. A joint WGCV / WGISS activity aims to provide web-based access and value-added formatting / geo-registration of Earth Observation remote sensing (and other) data over a set of "core" validation sites in support of global land product inter-comparison activities. Phase 1 of this project is now underway. This initial phase involves the survey of five globally distributed sites

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# The Working Group on Information Systems and Services

**Mr. Terry Fisher**  
CCRS  
Chair, WGISS



WGISS-14 was hosted by NOAA in Honolulu, Hawaii in September 2002. Preceding the WGISS meeting NOAA arranged for a "Disasters in the Pacific Basin" workshop including a visit to the Hawaii Volcano Observatory at Kilauea. National, state, and local government plus academic speakers joined CEOS Agency talks in providing an excellent workshop.

The final edits for the WG re-organization were agreed to at WGISS-14. These sweeping changes were presented and approved at the November Plenary-16 in Frascati, Italy. The re-organization condenses from three to two the sub-groups that will support the WG and better align to Plenary objectives. The first SG is called Technology and Services and the second is Projects and Applications. The Chair for the Technology and Services SG is Wyn Cudlip from BNSC/QinetiQ and the Vice-Chair is Paul Kopp from CNES. The Projects and Applications SG will be chaired by Ivan Petiteville from ESA and the Vice-Chair is Osamu Ochiai from NASDA/EORC.

The last Sub-Group meeting under the old configuration was held at Alexandria, Virginia September 2002. NASA hosted the meetings that devoted a significant portion to the GRID technologies that WGISS is embracing.

The Technology and Services Sub-Group's Archive Task Team has sent a survey to all WGISS Members and Associates requesting their archive topics of interest. The results will determine the Task Team agenda and provide attention to Agency needs in this area. Please ensure that your Agency has returned the survey to John Faundeen ([faundeen@usgs.gov](mailto:faundeen@usgs.gov)).

In addition to changing the physical structure of WGISS, the participants felt that conducting the SG meetings immediately before WGISS meetings would improve communications between the two groups and reduce travel budgets. This new meeting schedule will be implemented starting with WGISS-15.

The WGISS 5-Year Plan has been updated to reflect the major organizational changes approved recently. The Plan also lays out the groundwork for how WGISS plans to better align itself to Plenary goals. This report is on the WGISS web at <http://wgiss.ceos.org>.

In response to Plenary guidance, the WG established an ad hoc team charged with presenting CEOS relevance and value to participants of the World Summit on Sustainable Development held in Johannesburg, South Africa 26 August to 4 September 2002. The team developed a professional movie-loop of WGISS tools

depicting real-world applications related to sustainable development. The movie-loop was provided to each WGISS and Plenary-16 representative and is available for downloading from the WGISS site <http://wgiss.ceos.org/gisd>

WGISS is actively seeking nominations for its Vice-Chair position. Interested Agencies are invited to contact Terry Fisher, [terry.fisher@ccrs.nrcan.gc.ca](mailto:terry.fisher@ccrs.nrcan.gc.ca), by March of 2003 with candidates. Vice-Chair terms are for two years followed by accession to the Chairmanship for an additional two years.

The current Vice-Chair, John Faundeen of USGS, becomes WGISS Chair at the 17th CEOS Plenary in November 2003.

WGISS-15 will be hosted by CNES at Toulouse, France 12-16 May 2003. All Members and Associates are encouraged to send representatives to this meeting.

Further information on WGISS can be found at <http://www.ceos.org> under Subsidiary Groups button or directly at <http://wgiss.ceos.org>. ■

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from October 2002 – October 2003; the LPV subgroup is working closely with WGISS to achieve this goal.

Further collaboration has been sought, this time with the ISPRS. The joint WGCV / ISPRS taskforce on radiometric and geometric standards has now been established and its chair is soon to be appointed. Manfred Schroeder (DLR) chaired a kick-off meeting in conjunction with an ISPRS meeting in Denver, USA, on 11 November 2002. This

meeting defined the terms of reference for the taskforce and established its membership.

The recent success of the establishment of joint activities between the WGCV and other groups and organisations has been apparent and these relationships will be nurtured and improved. The subgroup members and the user community in general remain the main determining force behind the activities of the WGCV.

The 20th WGCV plenary will be held in Hobart, Australia, from 12 – 14 February 2003, and will be hosted by CSIRO Marine

Research, the CSIRO Earth Observation Centre, and the Antarctic Cooperative Research Centre. The 21st WGCV plenary will be held in Beijing, China, from 15 – 18 October 2003.

For more information, see the WGCV web site at <http://www.wgcveos.org> or contact the WGCV Chair, Yves-Louis Desnos (email: [Yves-Louis.Desnos@esa.int](mailto:Yves-Louis.Desnos@esa.int)) ■



## Progress in CEOS WGEdu Activities

**Dr. Sergio Camacho**

Chair, WGEdu

United Nations Office for Outer Space Affairs

The CEOS Working Group on Education and Training (WGEdu) was established by the CEOS 13th Plenary and tasked to develop a strategy for future CEOS activities in education and training particularly in developing countries.

The strategy will establish an effective coordination and partnership mechanism between CEOS agencies and educational institutions. Our goal is to facilitate activities that enhance international education and training in Earth Observation (EO) techniques, data analysis, interpretation and applications.

At plenary this year Mukund Rao, of the Indian Space Research Organization stepped down as Chair of the Working Group. The new Chair and Co-Chairs are Sergio Camacho, United Nations Office for Outer Space Affairs, Christine Hutton, Canada Centre for Remote Sensing and Maurizio Fea,

European Space Agency, with assistance from Robert Meisner of Deutsches Zentrum für Luft – und Raumfahrt.

In 2002, a three year action plan was finalized and includes: establishing an interactive resource web site containing information and links to materials on EO training and education; development of data exchange principles for education and training use; provide assistance where requested with EO curricula and data requirements; and increase awareness of EO technology and its applications. Last year's focus was on the design interface for the web site and the components highlighting EO educational materials. The web site development was carried out in partnership by CCRS, NASDA/AIT and EUMETSAT. All CEOS agencies were invited to contribute materials to the site.

In response to the implementation plan for the World Summit on Sustainable

Development, WGEdu contributed to a CEOS proposal for a Type II Partnership. Some of the suggested activities include; provide for the timely integration and refresh of Earth observation data, information and techniques into education and training programmes; promote a growing cadre of specialists in EO and environmental issues and the expansion of the practical applications of EO data and information; and underscore the relevance of Earth observation for policy and decision-making.

In 2003, the WGEdu plans are to: encourage all CEOS agencies to contribute to the education and training materials web site, organize a "policy" workshop to discuss the "data exchange principles for Educational purposes" and contribute to the CEOS Type II partnership and the CEOS WSSD follow up programme. ■

## Disaster Management Support Group Completes Mission and Transitions Activities

**Ms. Helen M. Wood**, NOAA, Chair, DMSG

At its November 2002 meeting, the CEOS 16th Plenary accepted and endorsed the Final Report and recommendations of the ad hoc Disaster Management Support Group (DMSG).

In broad terms, the DMSG recommendations encourage CEOS member agencies to develop plans for increasing responsiveness to information requirements of the disaster management community. Agency responses to DMSG recommendations are now being collected and posted to the DMSG website, <http://disaster.ceos.org>, which will migrate to the main CEOS server in the coming months.

The acceptance of the Final Report marks the dissolution of the DMSG, and I would

like to take this opportunity to convey my sincere thanks to each organization and the over 500 experts that participated in the effort. Your hard work has resulted in:

- A final report containing a detailed assessment of the state-of-the-practice, and needs for improvement, in the use of Earth observing satellite data for disaster management support.
- Increased cooperation across government, academic and commercial sectors in this application area; and
- The development of international guidelines for specific hazard scenarios, which are now forming the basis for expanded disaster response activities of the International Charter: Space and Major Disasters.

With the successful completion of DMSG's work, CEOS remains dedicated to this challenging application area, and views it as an area of continuing emphasis for the future. CEOS members will continue to participate actively with other groups, including the IGOS partners, relevant UN agencies, and the International Charter to promote and facilitate the effective use of EO satellites for disaster management support. ■



# UNESCO and Space : UNESCO as a new CEOS Associate

**Prof. Dr. W. Erdelen**  
*Assistant Director-General for Natural Sciences*  
UNESCO



The 16th CEOS Plenary meeting held on 20-21 November 2002 at ESRIN-Frascati (Italy) approved UNESCO's application to become a CEOS Associate Member, acknowledging the longstanding contribution of UNESCO to the development and utilisation of space techniques in the framework of its programmes.

The mandate of the United Nations Educational, Scientific and Cultural Organisation (UNESCO) is to foster international cooperation in the fields of education, science, culture and communication and to assist in narrowing the gap between the developed and developing countries in these areas. UNESCO operates along four main lines of actions:

- Analysis of forms of education, science, culture and communication needed for to-morrow
- Promotion of sharing of knowledge
- Assistance in strengthening human and institutional capacities of Member States by providing technical expertise and cooperation for the development of national policies and projects
- Exchange of specialised information

To this end, UNESCO makes use of its worldwide educational, scientific, cultural and communication networks as well as its high-level political and diplomatic contacts.

UNESCO has been carrying out the last twenty years Earth Observation activities through its science programmes namely, the International Hydrological Programme (IHP), the Intergovernmental Oceanographic Commission (IOC), the Man and Biosphere (MAB) programme and the International Geological Correlation Programme (IGCP).

UNESCO is an active member of the IGOS Integrated Global Water Cycle Observations (IGWCO) theme group, and as a follow-up to the World Summit on Sustainable Development (Johannesburg, 2002), is exploring with ESA the creation of a "Space Hydrology International Partnership" aimed at studying extreme events and ground water management. Cooperating closely with the Global Ocean Observing Systems (GOOS), UNESCO contributes to research on climate variability, global change related to marine environment and integrated coastal management. UNESCO endeavours to strengthen the remote sensing and GIS capabilities of African countries in the fields of oceanography, hydrology, ecology and education. To this

end, the "Applications of remote sensing to integrated management of ecosystems and water resources in Africa" project has been launched whereby academic institutions will be reinforced through research and training networking activities, introduction of E-learning programmes and initiation of lecturer exchange programmes. Remote sensing technology is gradually being introduced in the MAB programme to improve the monitoring and management of biospheres reserves for better conservation of biological diversity. In cooperation with ESA and the British Geological Survey, UNESCO is leading the IGOS Theme Team on the Geohazard Theme, a topic which has received considerable attention in the deliberations and outcome of WSSD. The group aims to define a strategy to map, monitor and predict major hazards such as earthquakes, volcanic eruptions, landslides and land subsidence, in order to provide decision-makers with timely and reliable information.

Recently, UNESCO invited space agencies to cooperate through an open agreement to support the activities of the World Heritage Centre (WHC) concerning the use of space techniques in monitoring of natural and cultural sites listed under the World Heritage Convention. A first pilot project has just started with ESA on the monitoring of gorillas habitats in the natural parks located in Central Africa.

UNESCO is also active in the field of education and capacity building. A major initiative has recently been launched in cooperation with space agencies and specialised NGOs such as IAF, COSPAR, ISPRS, ISU called the "Space Education Programme" (SEP). The objective is to introduce space disciplines, such as space science and Earth observation from space, in the curricula of secondary schooling system to make the younger generation more aware of space capabilities and turn more students to choose space science and engineering careers. UNESCO will collaborate closely with the CEOS ad-hoc Working Group on Education and with CEOS Type II Partnership on Education selected for implementation at the WSSD meeting in Johannesburg.

The participation of UNESCO as Associate Member of CEOS will further enhance international cooperation and reap benefits for all stakeholders of CEOS. ■

# Successful ADEOS-II Launch - Joining in an International Earth Observing System

Mr. Chu Ishida  
NASDA

At 10:31 am, 14 December 2002, H-IIA Flight No. 4 blasted into the clear blue sky from Tanegashima Space Center - located south of Japan. ADEOS-II is Japan's second major Earth observation platform after ADEOS - which ceased operation in 1996 - producing a valuable 10 months of multi-sensor data sets. The successful launch of ADEOS-II marked the end of 2002, which saw a series of very successful launches of international Earth observation missions. 2002 was also significant as the year of the World Summit on Sustainable Development (WSSD), held in Johannesburg, where the IGOS Partnership and the CEOS partnership on education were registered as Type-II Partnerships.

ADEOS-II was designed to continue global observations of the state of ocean, atmosphere and land, contributing to Earth science and applications in meteorology, fisheries etc.

ADEOS-II carries NASDA's instruments and those provided by the Ministry of Environment, NASA/JPL and CNES.

The measurements by ADEOS-II, together with those of other satellite systems of other space agencies and in-situ observations, represent the start of a new self-consistent data set that is expected to revolutionize climate change models. ADEOS-II data will be provided to selected PI's worldwide, global change research institutes, and operational agencies such as Japan Meteorological Agency (JMA), NOAA, Japan Fishery Information Center (JAFIC) and others. ADEOS-II will contribute to IGOS Themes, such as the GODAE project of the Ocean Theme, and CEOP of the Water Cycle Theme.

We are seeing a new era of satellite Earth observation via the capabilities offered by these space platforms, supported by international efforts on in-situ measurements,

process studies and simulations. Integration of these elements is key for the success of Earth observation, and CEOS and the IGOS Partnership have an important central role to play. CEOS and NASDA will organize a Symposium on Space Platform for Water and Climate Observation in March 2003 on Awaji island to address data utilization efforts. Refer to

<http://sharaku.eorc.nasda.go.jp/ADEOS2/awaji030312/index.html> for more details. ■



Contributions for future issues of the CEOS Newsletter from the CEOS Members and Associates, and subscriptions to the CEOS Newsletter, please contact CEOS Japan Secretariat : [ceos-jpn@nasda.go.jp](mailto:ceos-jpn@nasda.go.jp), or [misawa@restec.or.jp](mailto:misawa@restec.or.jp) [http://nasda.ceos.org/ceosnews\\_menu\\_e.html](http://nasda.ceos.org/ceosnews_menu_e.html)

## Meeting Calendar

As of Jan. 2003

Activities	2002					2003							
	November	December	January	February	March	April	May	June	July	August	September	October	November
<b>CEOS Plenary</b>		▲ 20-21 16th CEOS Plenary ▲ 19 WSSD Follow-up Seminar ESA/ESRIN/Frascati, Italy									▲ TBD WSSD Follow-up Workshop	17th CEOS Plenary NOAA/Colorado, USA	▲ 18-20
<b>CEOS SIT</b> (Strategic Implementation Team)				▲ 4-5 SIT-11 WMO/Geneva									
<b>CEOS WGISS</b> (Working Group on Information Systems & Services) Subgroups/Task Team								▲ 12-16 WGISS-15/JSGs CNES/Toulouse			▲ WGISS-16 GISTDA/NASDA/Thailand		
<b>CEOS WGCV</b> (Working Group on Calibration and Validation) Subgroups	▲ #2 IMRC Workshop			▲ 12-14 WGCV-20 CSIRO/AAI, Hobart, Tasmania				▲ 1-3 SAR SG, CSA/Canada					▲ 15-18 WGCV-21 NRSCC/Beijing, China
<b>CEOS WGEdu</b> (Ad Hoc Working Group on EO Education and Training)													
<b>IGOS Partners</b>								▲ 5 IGOS-P10 ICSU/UNESCO HQ, Paris					
<b>Themes:</b>									▲ IUGG, Sapporo, Japan				
<b>Others</b>					▲ 12-14 Awaji Symposium Awajishima, Japan			▲ 1-3 G8 Summit Evian les bain, Paris		▲ 28-29 APAN 2003, Korea			12/1-12 UNFCCC COP9 Italy
					▲ 15-22 WWF-3 Kyoto, Osaka & Shiga, Japan			▲ 2-13 SBSTA 18, Bonn		▲ IGARSS, Toulouse, France			▲ TBD GIS Workshop Africa
					▲ 21-24 APAN Conference, Fukuoka								

▲: determined    △: to be determined (Date, Host organization/Location)    CEOS-related meetings are open only to designated participants.

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